

REMARKS

The non-final Office Action issued 08 September 2003 has been reviewed and the comments of the U.S. Patent and Trademark Office have been considered. Claims 1, 2, and 4 have been amended. Claims 17-23 have been canceled without prejudice or disclaimer. Accordingly, applicant respectfully requests reconsideration of claims 1-16.

Applicant thanks the Examiner for indicating that claims 2, 3, and 5-16 would be allowable if rewritten into independent form. Claim 2 has been so rewritten, and claim 4 has been amended to depend from allowable claim 2. Accordingly, claims 2-16 are in condition for allowance.

Claims 1 and 4 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,235,954 to Sverdrin. Insofar as the rejection is applicable to amended claim 1, applicant respectfully traverses this rejection as Sverdrin fails to teach or suggest the claimed invention as a whole, as recited in claim 1.

Amended claim 1 recites a fuel injector that includes, *inter alia*, a compensator being coupled to a distal end of an actuation element via a plunger. The compensator has a chamber formed between a plunger and a sleeve to define a volume. The chamber contains a generally constant volume of magnetically-active fluid that is responsive to magnetic flux so as to change the fluid from a first state to a second state to generally prevent movement of the plunger relative to the sleeve. Support for this amendment to claim 1 is provided in the originally filed application at, for example, paragraph 0037 and in Figure 4.

In contrast, Sverdrin shows and describes a fuel injector 10 with pressurized magnetic fluid to control the injection of fuel (col. 8: lines 20-37). Specifically, a magnetic fluid under pressure flows through fluid inlet 60 of fuel injector body 12 (Fig. 1) into an annular space between control valves 38 and 50, and the pressurized magnetic fluid is used to regulate the control valves 38 and 50. During actuation, the pressure level of the magnetic fluid from an outside source is varied compared with the electromagnetic force provided by the electromagnetic coils 63 and 64 to permit fuel flow through passage 16, six passages 46, and to fuel chamber 48. The magnetic fluid of Sverdrin also provides a positive seal (col. 5: lines 28-31) for an annular clearance around control valves 38 and 50 so that the control valves 38 and 50 are sealed from the fuel entering passage 16 and are centered in the annular clearance (col. 11:

lines 43-55). That is, the magnetic fluid of Sverdlin is pressurized and varied by an outside source through inlet port 60 to control the movement of valves 38 and 50 (for injecting fuel), to provide a seal for the control valves 38 and 50, and to center the control valves 38 and 50, instead of preventing movement of a plunger relative to a sleeve by a change in the viscosity state of a generally constant volume of the magnetic fluid contained within a chamber, as recited in claim 1. Accordingly, claim 1 is patentable because Sverdlin fails to teach or suggest features of the claimed invention as a whole.

CONCLUSION

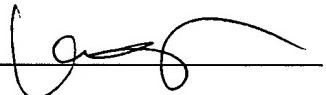
In view of the foregoing remarks, applicant respectfully requests the reconsideration and reexamination of this application and allowance of the pending claims. Applicant respectfully invites the Examiner to contact the undersigned at (202) 739-5203 if there are any outstanding issues that can be resolved via a telephone conference.

EXCEPT for issue fees payable under 37 C.F.R. §1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. §1.136(a)(3).

Respectfully submitted,

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